AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A catalyzer, comprising:

a plurality of plane sheets arranged superposed and spaced apart from each other in a stack, each of the plane sheets having a top side and a bottom side, each two successive plane sheets defining a channel that extends parallel to a flow direction, said channel being delimited by the plane sheets; ~~and~~

a corrugated sheet uncoated with a catalytic coating and having a plurality of ridges and grooves disposed within the channel, the ridges being connected to the plane sheets of the channel and the grooves being substantially parallel to the flow direction; and

a catalytic coating disposed on a predetermined section of at least one of the top side and the bottom side of each plane sheet and defining a coated section which only partially covers the top side and/or the bottom side, the coated section positioned opposite to an uncoated section of the plane sheet,

wherein at least a portion of a heat radiation emitted from the catalytic coating is absorbed by the uncoated section of the plane sheet.

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Original) The catalyzer as claimed in claim 1, wherein the uncoated section of the plane sheet is provided with a material for absorbing at least a portion of the heat radiated from the catalytic coating or for promoting a recombination reaction of at least one radical.

6. (Currently Amended) The catalyzer as claimed in claim ~~2~~ 1, wherein the ~~uncoated section of the~~ corrugated sheet is provided with a material for absorbing at least a portion of the heat radiated from the catalytic coating or for promoting a recombination reaction of at least one radical.

7. (Currently Amended) The catalyzer as claimed in claim ~~2~~ 1, wherein the corrugated sheet has a thickness less than a thickness of the plane sheet.

8. (Currently Amended) The catalyzer as claimed in claim ~~2~~ 1, wherein a thickness of the plane sheet and a thickness of the corrugated sheet is approximately equal.

9. (Currently Amended) The catalyzer as claimed in claim ~~2~~ 1, wherein the corrugated sheet has a thickness of less than 0.1 mm.

10. (Original) The catalyzer as claimed in claim 9, wherein the thickness is about 0.05 mm.

11. (Original) The catalyzer as claimed in claim 1, wherein each plane sheet is uncoated at an inlet and at an outlet of the catalyzer.

12. (Original) The catalyzer as claimed in claim 11, wherein the uncoated surface of the plane sheet has a length in the flow direction of approximately 2 to 5 mm at the inlet and a length in the flow direction of approximately 10 to 15 mm at the outlet.

13. (Original) The catalyzer as claimed in claim 1, wherein a cross-section of each channel is essentially the same.

14. (Currently Amended) ~~The catalyzer as claimed in claim 1, wherein each plane sheet has a total length in the flow direction, the total length divided into an even number of coated sections, each coated section of a coated length, and~~

~~wherein each plane sheet has a sequence of alternating coated and uncoated sections, the coated and uncoated sections on the two successive plane sheets defining the channel are offset from each other in the flow direction by one coated length.~~

A catalyzer, comprising:

a plurality of plane sheets arranged superposed and spaced apart from each other in a stack, each two successive plane sheets defining a channel that extends parallel to a flow direction, the channel being delimited by the plane sheets; and

a catalytic coating disposed on a predetermined section of each plane sheet and defining a coated section, the coated section positioned opposite to an uncoated section of the plane sheet;

at least a portion of a heat radiation emitted from the catalytic coating is absorbed by the uncoated section of the plane sheet;

each plane sheet has a total length in the flow direction, the total length divided into an even number of coated sections, each coated section of a coated length; and

wherein each plane sheet has a sequence of alternating coated and uncoated sections, the coated and uncoated sections on the two successive plane sheets defining the channel are offset from each other in the flow direction by one coated length.

15. (Original) The catalyzer as claimed in claim 14, wherein the catalytic coating is disposed as a parallel, continuous band of approximately constant width that extends in the flow direction, the band arranged across a width of the plane sheet alternately on a top side and a bottom side of the plane sheet and a cross section of the plane sheet perpendicular to the flow direction has the band on only one side.

16. (Original) The catalyzer as claimed in claim 15, wherein the band of the catalytic coating is associated with each of the channels.

17. (Original) The catalyzer as claimed in claim 14, wherein the catalytic coating is a row that extends in the flow direction having a plurality of equally sized, parallel, individual islet-shaped areas, the row arranged across a width of the plane sheet alternately on a top side and a bottom side of the plane sheet and a cross section of the plane sheet perpendicular to the flow direction has the row on only one side.

18. (Original) The catalyzer as claimed in claim 17, wherein the row of the islet-shaped catalytic coating is assigned to each of the channels.

19. (Currently Amended) The catalyzer as claimed in claim 1, wherein the catalyzer has a total length in the flow direction, the total length divided into an even number of coated sections, each coated section of a coated length, and

wherein each plane sheet extends only over one of the coated sections and is provided with a catalytic coating and successive plane sheets in the stack are staggered relative to the coated sections.

20. (Original) The catalyzer as claimed in claim 19, wherein the coated section is a parallel, continuous band of approximately constant width that extends in the flow direction, the band arranged across the width of the plane sheet alternately

on a top side and a bottom side of the plane sheet and a cross section of the plane sheet perpendicular to the flow direction has the band on only one side.

21. (Original) The catalyzer as claimed in claim 20, wherein the band is associated with each of the channels.

22. (Currently Amended) The catalyzer as claimed in claim 19, wherein the coated section is a row that extends in the flow direction having a plurality of equally sized, parallel, individual islet-shaped areas, the row arranged across a width of the plane sheet and alternately on ~~a~~ the top side and ~~a~~ the bottom side of the plane sheet and a cross section of the plane sheet perpendicular to the flow direction has the row on only one side.

23. (Original) The catalyzer as claimed in claim 22, wherein the row is associated with each of the channels.

24. (Original) The catalyzer as claimed in claim 1, wherein the coated section is provided over a total length of each plane sheet, the coated section having a plurality of rows, each row extending in the flow direction and having a plurality of equally sized, parallel, individual islet-shaped areas, and

wherein the areas are arranged both within each row and transversely to each row alternately on the top side and bottom side of the plane sheet and a cross section of the plane sheet perpendicular to the flow direction has the coating on only one side.

25. (Original) The catalyzer as claimed in claim 24, wherein at least one row is associated with each of the channels.

26. (Currently Amended) The catalyzer of claim 1, wherein each of the coated sections of each ~~corrugated~~ plane sheet is disposed within a groove of the corrugated sheet.

27. (Original) The catalyzer of claim 26, wherein each of the successive corrugated sheets in the stack are staggered relative to the coated sections.

28. (Original) The catalyzer as claimed in claim 26, wherein the coated section is a parallel, continuous band of approximately constant width that extends in the flow direction, the band arranged within the groove of the corrugated sheet alternately on a top side and a bottom side of the corrugated sheet and a cross section of the corrugated sheet perpendicular to the flow direction has the band on only one side.

29. (Original) The catalyzer as claimed in claim 26, wherein the coated section is a row that extends in the flow direction having a plurality of equally sized, parallel, individual islet-shaped areas, the row arranged within the groove of the corrugated sheet alternately on a top side and a bottom side of the corrugated sheet and a cross section of the corrugated sheet perpendicular to the flow direction has the row on only one side.

30. (Original) The catalyzer as claimed in claim 29, wherein each row has a plurality of equally sized, parallel, individual islet-shaped areas, and

wherein the areas are arranged both within each row and transversely to each row alternately on the top side and bottom side of the corrugated sheet and a cross section of the corrugated sheet perpendicular to the flow direction has the coating on only one side.

31. (Original) The catalyzer as claimed in claim 1, wherein the catalyzer is used for an exothermic reaction having a concomitant, homogeneous gas phase reaction.

32. (Original) The catalyzer as claimed in claim 31, wherein the catalyzer is used in a gas turbine.

33. (New) A catalyzer, comprising:

a plurality of plane sheets arranged superposed and spaced apart from each other in a stack, each of the plane sheets having a top side and a bottom side, each two successive plane sheets defining a channel that extends parallel to a flow direction, the channel being delimited by the plane sheets;

a corrugated sheet having a plurality of ridges and grooves disposed within the channel, the ridges being connected to the plane sheets of the channel and the grooves being substantially parallel to the flow direction;

a catalytic coating disposed on a predetermined section of at least one of the top side and the bottom side of each plane sheet and defining a coated section which only partially covers the top side and/or the bottom side, the coated section positioned opposite to an uncoated section of the plane sheet; and

a catalytic coating disposed on at least a portion of the corrugated sheet, the portion defining a coated section of the corrugated sheet;

wherein at least a portion of a heat radiation emitted from the catalytic coating is absorbed by the uncoated section of the plane sheet.